ORDER No. 00-SM-016

# Service Manual

## Colour Television

## TX-28LK1F

## Z8 Chassis

## SPECIFICATION

**(Information in brackets { } refers to model TX-25LK1P)**

| | |
|---|---|
| **Power Source:** | 220-240V a.c., 50Hz |
| **Power Consumption:** | 97W {105W} |
| **Stand-by Power Consumption:** | 0,9W |
| **Aerial Impedance:** | 75Ω unbalanced, Coaxial Type |
| **Receiving System:** | PAL B/G, PAL D/K ,PAL-60<br>SECAM B/G, SECAM D/K<br>M.NTSC (AV)<br>NTSC (AV only) |
| **Receiving Channels:** | |
| VHF E2-E12 | VHF H1-H2 (ITALY) |
| VHF A-H (ITALY) | VHF R1-R2 |
| VHF R3-R5 | VHF R6-R12 |
| UHF E21-E69 | CATV (S01-S05) |
| CATV S1-S10 (M1-M10) | CATV S11-S20 (U1-U10) |
| CATV S21-S41 (HYPERBAND) | |
| **Intermediate Frequency:** | |
| **Video/Audio** | |
| Video | 38,9MHz |
| Audio | 32,4MHz, 32,66MHz (A2 CZECH)<br>33,05MHz (NICAM)<br>33,4MHz, 33,16MHz (A2)<br>33,05MHz (NICAM B/G) |
| Colour | 34,47MHz<br>34,5MHz, 34,65MHz |
| **Terminals:** | |
| AV1 IN | Video(21 pin) 1V p-p 75Ω<br>Audio(21 pin) 500mV rms 10kΩ<br>RGB (21 pin) 0,7V p-p 75Ω |
| AV1 OUT | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 1kΩ |
| RCA IN | Video 1V p-p 75Ω |
| RCA IN | Audio 500mV rms 10kΩ |
| **High Voltage:** | 28kV ± 1kV |
| **Picture Tube:** | A66ECF50X04 66cm<br>{A59EEQ15X97 59cm} |
| **Audio Output:** | 2 x 10W (M.P.O.)<br>2 x 5W (R.M.S.)<br>8Ω Impedance |
| **Headphones:** | 8Ω Impedance<br>3,5mm |
| **Accessories supplied :** | Remote Control<br>2 x R6 (UM3) Batteries |
| **Dimensions:** | |
| Height: | 571mm {522mm} |
| Width: | 778mm {718mm} |
| Depth: | 478mm {464mm} |
| **Net weight:** | 31,5kg {26,75kg} |

Specifications are subject to change without notice.
Weights and dimensions shown are approximate.

**NOTE:** This Service Manual should be used in conjunction with the Z8 Technical guide.

Panasonic

*MC-Service*

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# SAFETY PRECAUTIONS

## GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the a.c. supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts that have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the a.c. outlet.
5. Potentials as high as 29kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazard.

## LEAKAGE CURRENT COLD CHECK

1. Unplug the a.c. cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered a.c. plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts etc. When the exposed metallic part has a return path to the chassis, the reading should be between 4M ohm and 20M ohm. When the exposed metal does not have a return path to the chassis, the reading must be infinite.

## LEAKAGE CURRENT HOT CHECK

1. Plug the a.c. cord directly into the a.c. outlet. Do not use an isolation transformer for this check.
2. Connect a 2kΩ 10W resistor in series with an exposed metallic part on the receiver and an earth, such as a water pipe.
3. Use an a.c. voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed metallic part and check the voltage at each point.
5. Reverse the a.c. plug at the outlet and repeat each of the above measurements.

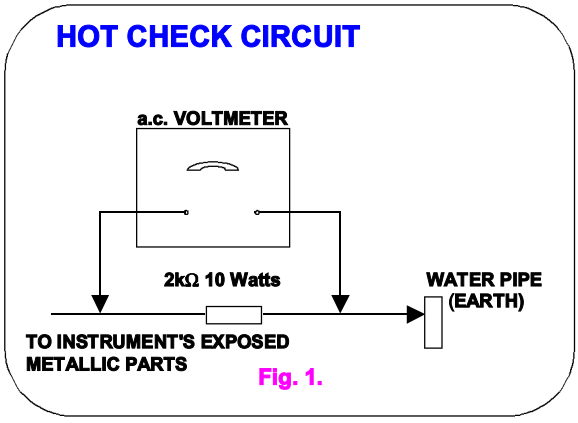


Fig. 1.

6. The potential at any point should not exceed 1,4Vrms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

## X-RADIATION WARNING

1. The potential sources of X-Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that the jig is capable of handling 29kV without causing X-Radiation.

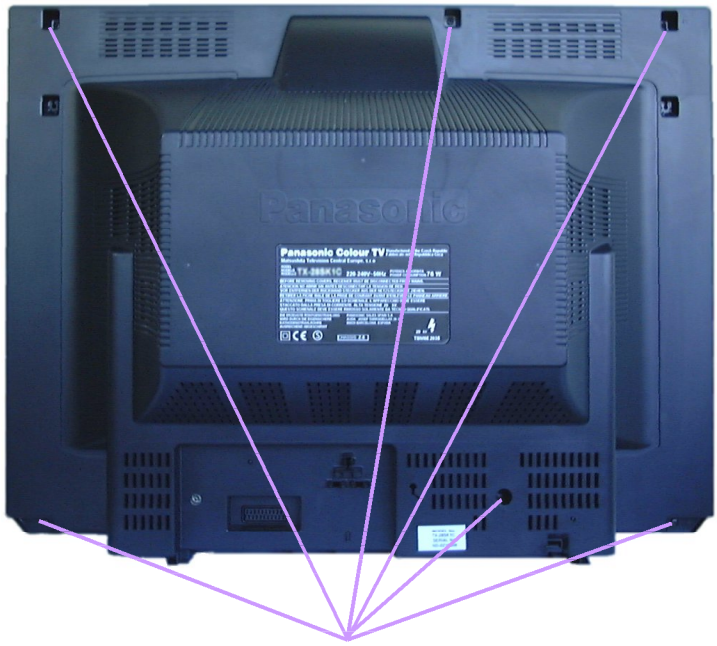
**NOTE:** It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate.
   28 kV ± 1kV.
   If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent any X-Radiation possibility, it is essential to use the specified tube.

# SERVICE HINTS

## How to remove the rear cover

1. Remove the 6 screws as shown in Fig.2.




Screws
Fig.2.

# LOCATION OF CONTROLS

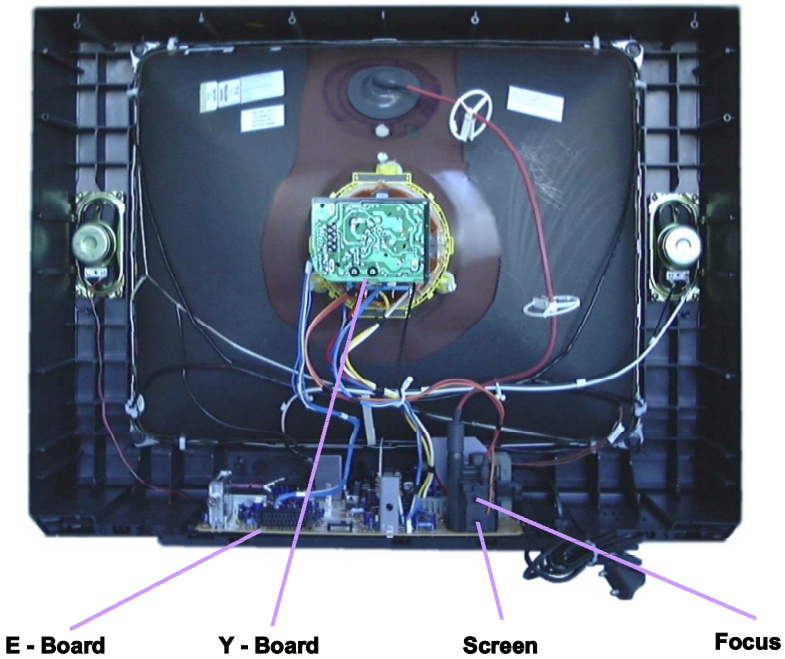



Fig.3.

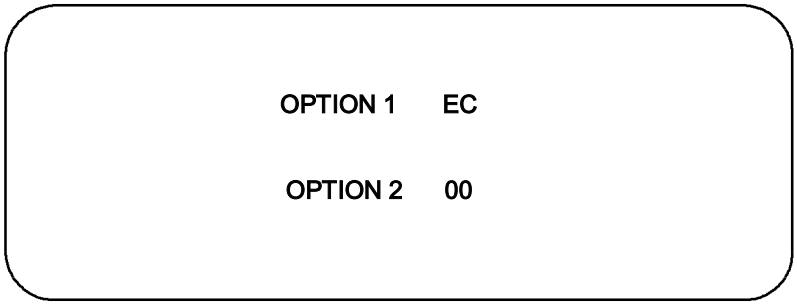
# ADJUSTMENT PROCEDURE

| Item/Preparation | Adjustments |
|---|---|
| **+B SET-UP**<br>1. Receive a Greyscale signal.<br>2. Set the controls:<br>Brightness Minimum<br>Contrast Minimum<br>Volume Minimum | Confirm the following voltages.<br>**TPE1** 3,3 ± 0,3V **TPE13** -13 ± 1V<br>**TPE2** 195 ± 10V **TPE14** 27,5 ± 1,5V<br>**TPE3** 13,5 ± 1V **TPE15** 28 ± 1,5V<br>**TPE4** 10 ± 1V **TPE16** 11,5 ± 1V<br>**TPE8** 5 ± 0,3V **TPE17** 8 ± 1V<br>**TPE11** 147 ± 10V **TPE18** 5 ± 0,3V |
| **Cut-Off / Ug2 Adjustment**<br>1. Receive a Greyscale signal.<br>2. Degauss the tube externally.<br>3. Set the TV into Service Mode 1.<br>4. Select Ug2 Test. | Set Contrast on maximum, set Brightness on centre, switch on AV mode.<br>Enter Service mode. Set Sub-Brightness to 31. Select Ug2.Press "+" and adjust screen Vr till sharp vertical line is visible and LED switches off. Then reduce screen Vr till LED is just switched on (pin6 of connector E1 must be connected to GND). |

Note: To set up "white balance" first set up "Cut off" register to 8. Then set up "high-light" with the help of "drive" registers. Finish setting-up of "Low-light" with the help of "Cut-off" register. Carry out setting-up of "white balance" in available TV systems (PAL, SECAM).

# FACTORY SETTINGS

To return customer settings to factory settings and clear owner ID of all information input by the customer, enter Self-Check mode. Press the down **(-/v)** button on the customer controls at the front of the TV set, at the same time pressing the **STATUS** button + on the remote control. To exit Self Check, switch off the TV set at the power button.
**NOTE:** Self Check should only be used when refurbishing the TV set and not during normal repair work.

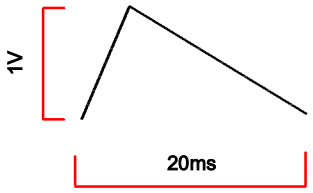



**Service Aids**
To aid in the service of our current chassis there are a number of Service Aids which have been made available.

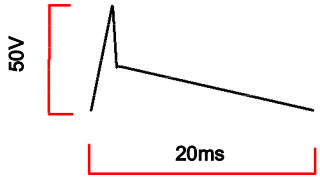
- **LUCI** interface kit (**L**inked **U**tility **C**omputer **I**nterface)
  Part number: TZS6EZ002
  This contains interface and cables for connecting TV service connector and a PC as well as diagnostic software. As new models are introduced upgrade software will become available.
- **VICI** (**V**isual **I**nteractive **C**omputer **I**nformation)
  These C.D.'s contain multimedia documentation providing quick access to service information.
  Part No. TZS7EZ006, TZS7EZ005, TZS8EZ001& TZS9EZ001
  1. Service Manuals
  2. Instruction Books
  3. Technical Information
- **TASMIN** (**T**echnically **A**dvanced **S**ystem for **M**ultimedia **I**nteractive **N**otes)
  As well as providing a first step towards more interactive training this product also achieves quick access to Technical Information.

# WAVEFORM PATTERN TABLE

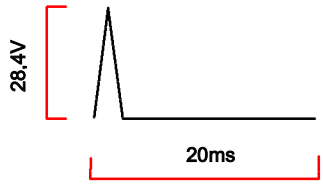
IC 601
Pin 21
**VERT - OUT**



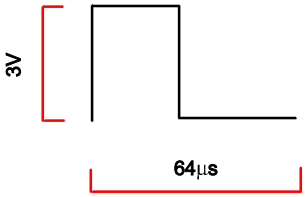

IC 451
Pin 2
**VERT - DRIVE**



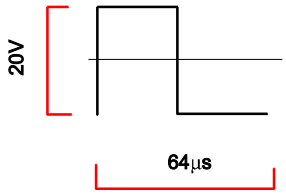

IC 451
Pin 3
**VFLB**



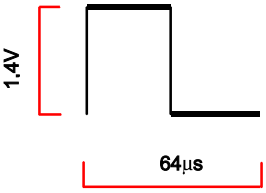

IC 601
Pin 33
**H - OUT**



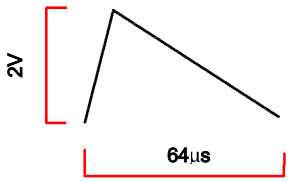

IC 701
Pin 5
**EW - OUT**



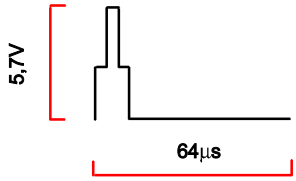

Base Q501
**H - PULSE**



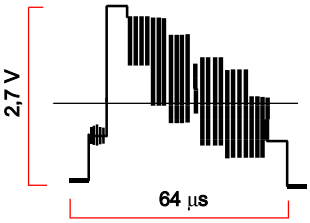

IC 701
Pin 8
**HFLB**



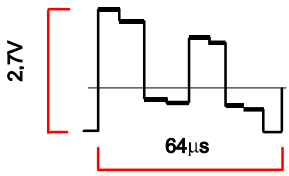

IC 601
Pin 34
**FBI/SCO**



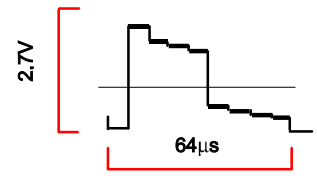

IC601
Pin 38
**VIDEO OUT**



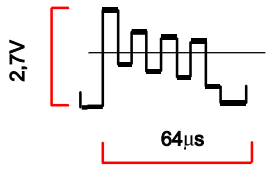

IC 601
Pin 51
**R - OUT**



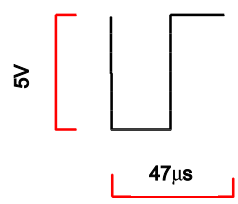

IC 601
Pin 52
**G - OUT**




IC 601
Pin 53
**B - OUT**




IC 601
Pin 2
**SCL**



# ALIGNMENT SETTINGS

To access Service Mode select program position 99 and set sharpness to minimum.
Press "**MUTE**" button on remote control and at the same time press the "**V**" button on the customer controls at the front of the TV, this will place the TV set into Service Mode.

Press ∧ / ∨ buttons to step up / down through the functions.

Press **+ / -** buttons to alter the function values.
Press "**STR**" button on the customer controls at the front of the TV after each adjustment has been made to store the required values.
To exit Service Mode press "**N**" button.

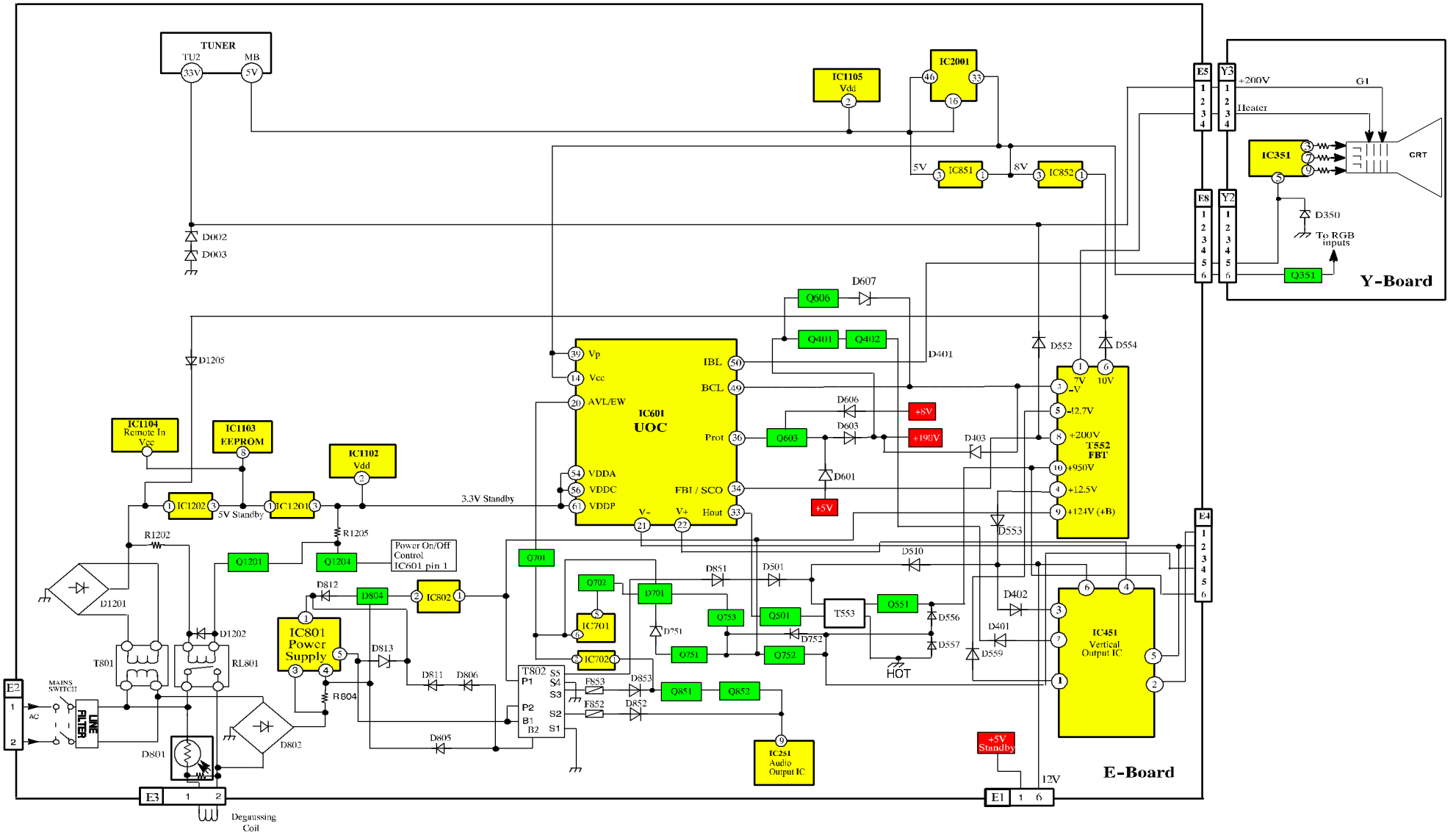
| Alignment Function | Setting indication<br>**Note:** All setting values are approximate | Settings / Special features |
|---|---|---|
| 1. Cut off (Ug2) | LED On/Off<br>(pin6 of connector E1 to the GND) | LED to be just On |
| 2. Vertical slope | V-SLO 32 | Optimum setting |
| 3. Vertical shift | V-POS 43 | Optimum setting. |
| 4. Vert. Amplitude | V-AMP 60 | Optimum setting. |
| 5. Horizontal shift | H-CTR 31 | Optimum setting. |
| 6. Horizontal parallelogram | H-PAR 034 | Optimum setting. |
| 7. Horizontal bow | H-BOW 031 | Optimum setting. |
| 8. R - Cut | R - CUT 08 | Optimum setting. |
| 9. G - Cut | G - CUT 08 | Optimum setting. |
| 10. R - Drive | R - DRV 31 | Optimum setting. |
| 11. G - Drive | G - DRV 31 | Optimum setting. |
| 12. B - Drive | B - DRV 31 | Optimum setting. |
| 13. AGC | AGC 20 | Optimum setting. |
| 14. Sub Colour | S - COL 15 | Optimum setting. |
| 15. Sub Brightness | S - BRI 31 | Optimum setting. |
| 16. Horizontal Width | EW – WD 34 | Optimum setting. |
| 17. EW parabola | EW – PR 32 | Optimum setting. |
| 18. EW Upper corners | EW – UC32 | Optimum setting. |
| 19. EW Lower corners | EW – LC 33 | Optimum setting. |
| 20. EW Trapezoid | EW – TP 36 | Optimum setting. |

Input remote code "**FA**" followed by key 5 (14 hex) or press "**Status button**" on remote control
(numerical keys 0-6 to change value, TV/AV button to store on remote control):

| Option Byte - 1 | | Option Byte Table | | |
|---|---|---|---|---|
| Bit No. | Value | Functions | | |
| 0 | 0 | French model | 0<br>1 | NO<br>YES |
| 1 | 0 | Irish model | 0<br>1 | NO<br>YES |
| 2 | 1 | NICAM enabled | 0<br>1 | NO<br>YES |
| 3 | 1 | A2 stereo enabled | 0<br>1 | NO<br>YES |
| 4 | 0 | Tuner manufacturer | 0<br>1 | MACO<br>ALPS |
| 5 | 1 | CRT | 0<br>1 | 21"<br>25",28" |
| 6 | 1 | Q - link enabled | 0<br>1 | NO<br>YES |
| 7 | 1 | TOP TEXT enabled | 0<br>1 | YES<br>NO |

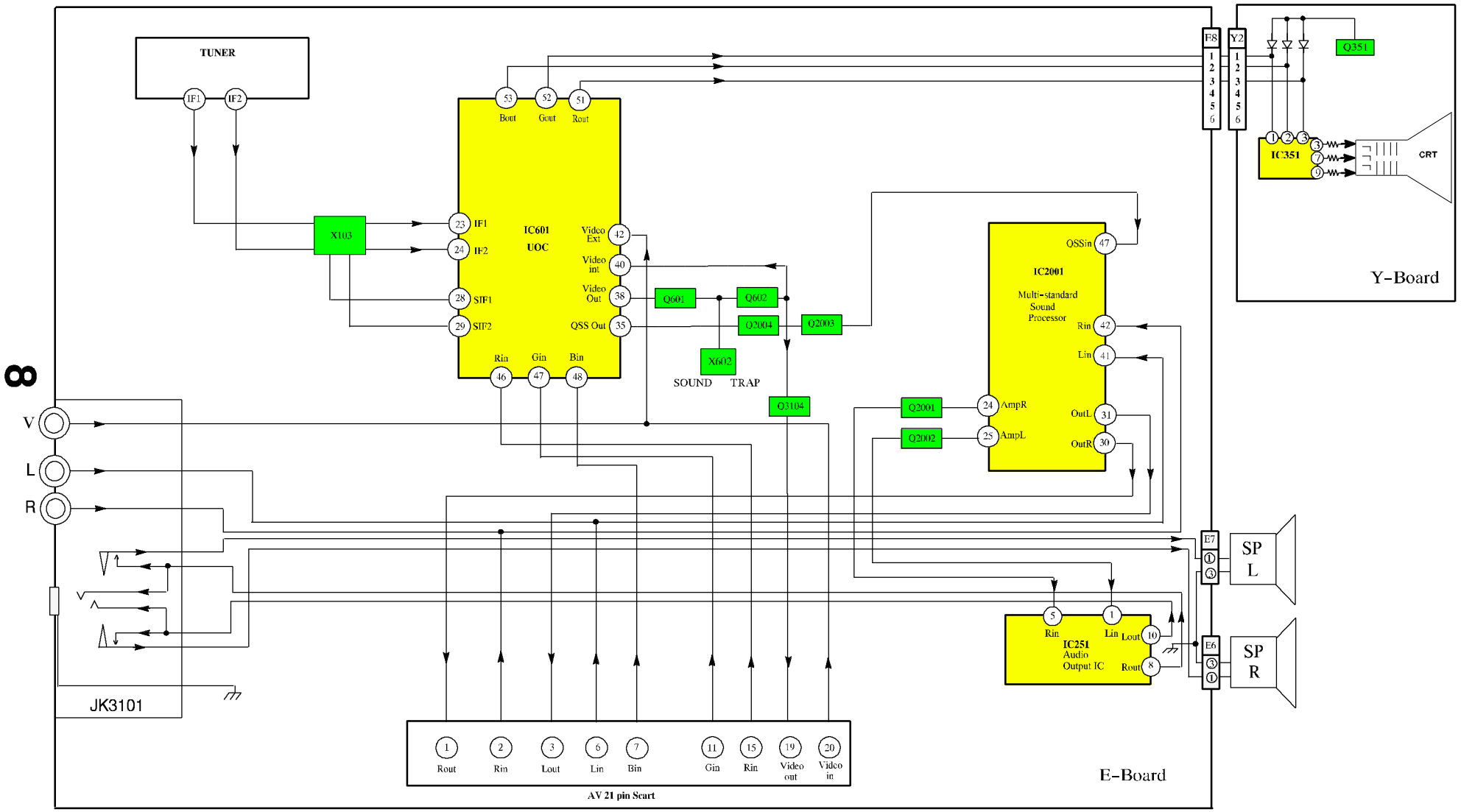
| Option Byte - 2 | | Option Byte Table | | |
|---|---|---|---|---|
| Bit No. | Value | Functions | | |
| 0 | 0 | SOUND AI | 0<br>1 | NO<br>YES |
| 1 | 0 | | | |
| 2 | 0 | | | |
| 3 | 0 | | | |
| 4 | 0 | | | |
| 5 | 0 | | | |
| 6 | 0 | | | |

# POWER SUPPLY & DEFLECTION BLOCK DIAGRAM

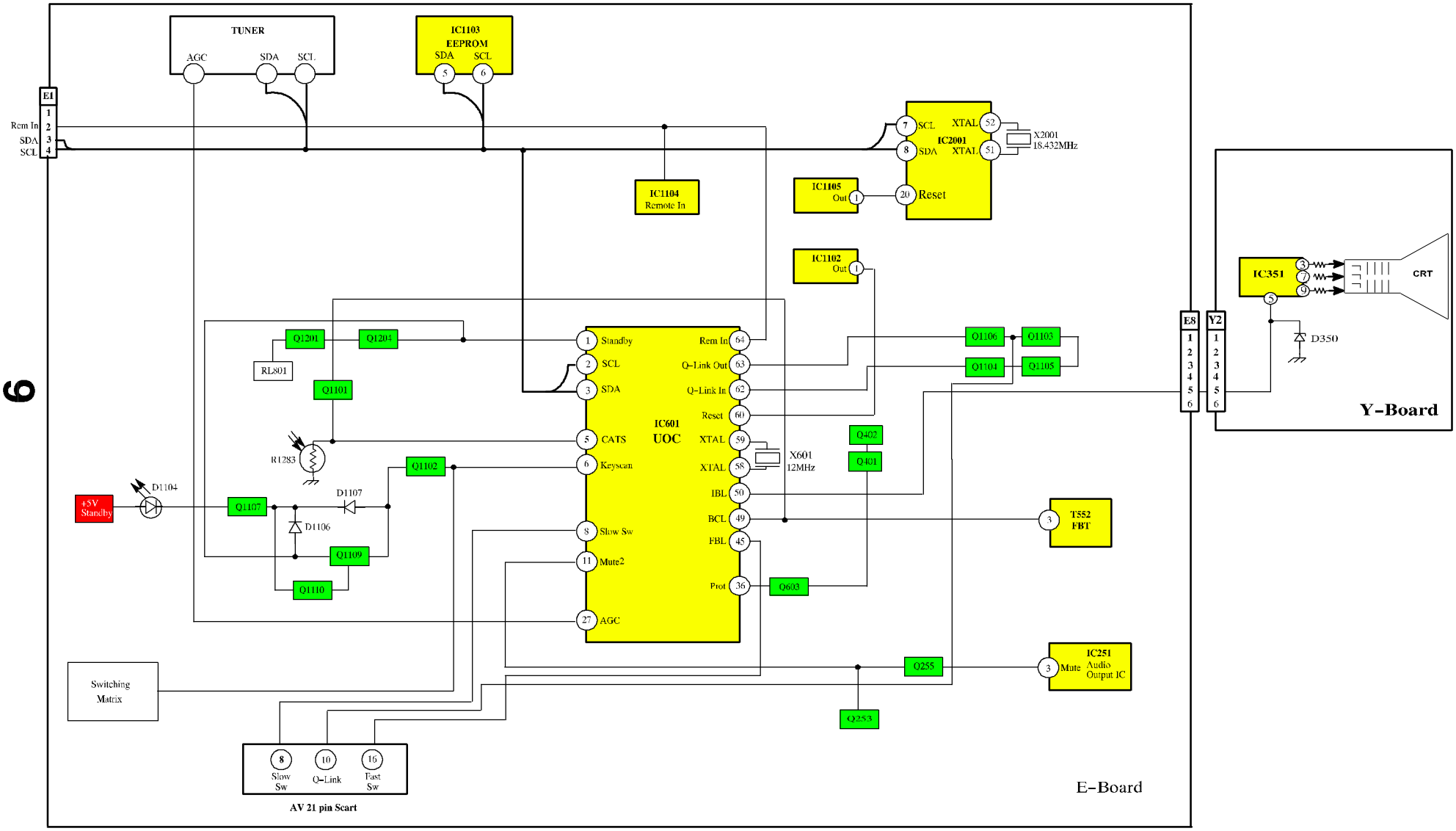



7

# VIDEO & STEREO AUDIO BLOCK DIAGRAM

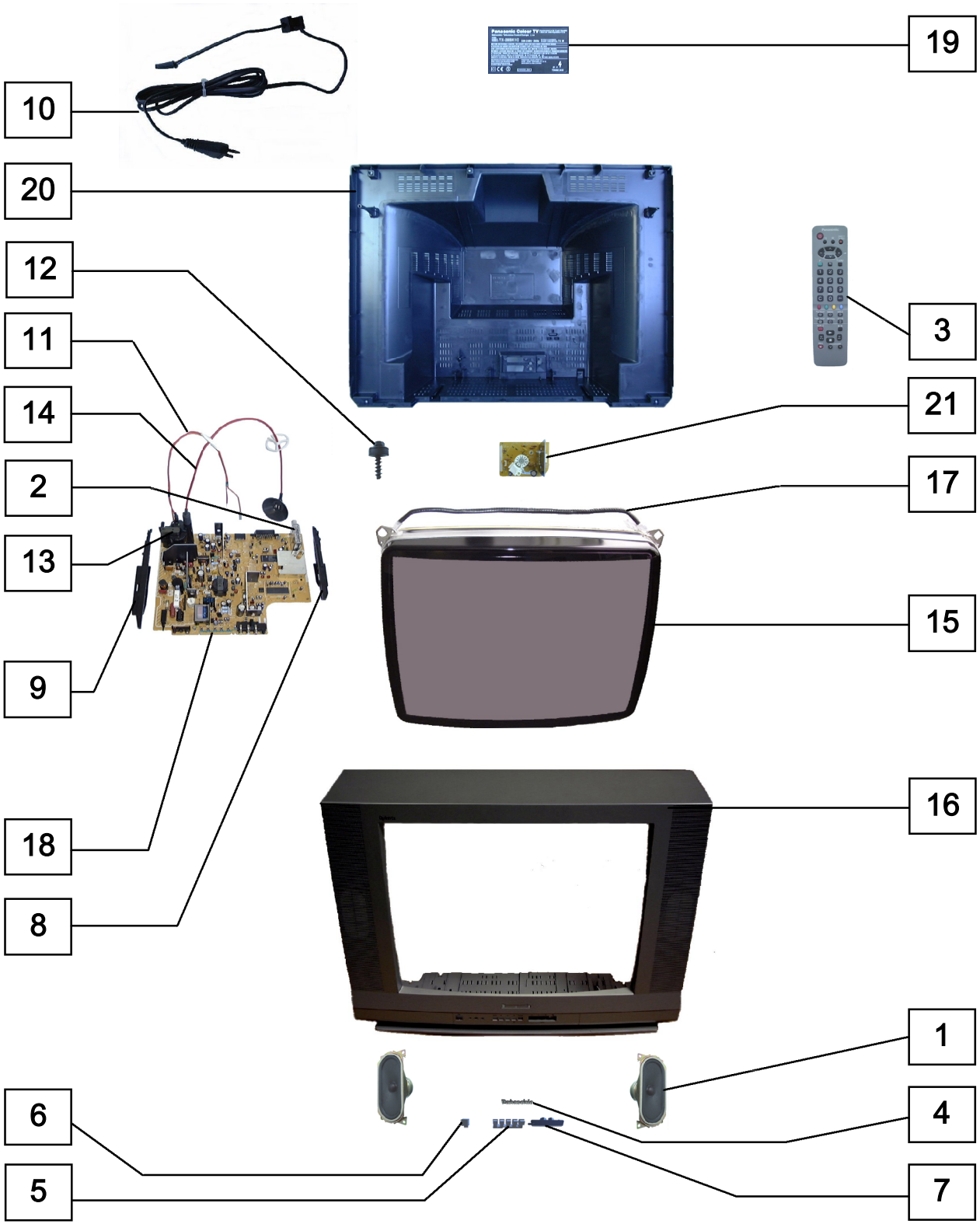


# CONTROL BLOCK DIAGRAM



# PARTS LOCATION

**NOTE:**
The numbers on the exploded view below refer to the exploded view section of the Replacement Parts List.



# REPLACEMENT PARTS LIST

**Important Safety Notice**

Components Identified by ⚠ mark have special characteristics important for safety.
* When replacing any of these components, use only manufacturers specified parts.
In case of ordering these spare parts, please always add the complete Model-Type number to your order.

| Cct Ref | Parts Number | Description | |
|---|---|---|---|
| **COMMON PARTS** | | | |
| **EXPLODED VIEW** | | | |
| 1 | EASG12D552A2 | SPEAKER | |
| 2 | ENV57D37G3 | TUNER | |
| 3 | EUR511310 | REMOTE CONTROL | |
| 4 | TBM8E1928 | PANASONIC BADGE | |
| 5 | TBX8E081 | 5-KEY BUTTON | |
| 6 | TBX8E082 | POWER BUTTON | |
| 7 | TKK8E041 | AV COVER | |
| 8 | TMZ8E010 | CHASISS RAIL LEFT | |
| 9 | TMZ8E011 | CHASSIS RAIL RIGHT | |
| 10 | TSX8E0043 | POWER CORD | ⚠ |
| 11 | TXFJTF01BMTG | FOCUS LEAD ASSY | ⚠ |
| 12 | VP17005-32 | CRT FIXING SCREW | |
| 13 | ZTFL84001A | F.B.T. | ⚠ |
| 14 | ZTUZAE550A | ANODE LEAD | ⚠ |
| **MISCELLANEOUS COMPONENTS** | | | |
| D801 | 232266296706 | THERMISTOR | ⚠ |
| POE3 | TMW8E015-2 | LED HOLDER | |
| R1283 | P1201 | SENSOR | |
| S351 | TJSC00300 | CRT SOCKET | ⚠ |
| **I.C.s** | | | |
| IC251 | TDA7263 | AUDIO OUTPUT | |
| IC351 | TDA6108JF | RGB OUTPUT | |
| IC451 | LA7845N | VERTICAL OUTPUT | |
| IC601 | TDA9365V505S | AUDIO/VIDEO PROCESSOR | |
| IC701 | TEA2031A | E/W CORRECTION | |
| IC702 | AN78L20 | 20V REGULATOR | |
| IC801 | STRF6523LF51 | POWER SUPPLY | |
| IC802 | SE140NLF4 | ERROR IC | |
| IC851 | L78M05MRB | 5V REGULATOR | |
| IC852 | BA08T-M3 | 8V REGULATOR | |
| IC1102 | MN13812-HTA | RESET | |
| IC1104 | RPM-6937 | LED RECEIVER | |
| IC1105 | MN1381-R(TA) | RESET | |
| IC1201 | BA033T | 3.3V REGULATOR | |
| IC1202 | BA05T-M1 | 5V REGULATOR | |
| IC2001 | MSP3415DPOB3 | AUDIO PROCESSOR | |
| **FUSES** | | | |
| F801 | 19181-3.15 | FUSE | ⚠ |
| F801-1 | EYF52BC | FUSE HOLDER | |
| F801-2 | EYF52BC | FUSE HOLDER | |
| F851 | TR5-T500 | FUSE | ⚠ |
| F852 | TR5-T1000 | FUSE | ⚠ |
| F853 | TR5-T500 | FUSE | ⚠ |

| Cct Ref | Parts Number | Description | |
|---|---|---|---|
| **DIODES** | | | |
| D002 | MTZJT-7716A | DIODE | |
| D003 | MTZJT-7716A | DIODE | |
| D260 | MA29W-ATA | DIODE | |
| D261 | MTZJT-7739C | DIODE | |
| D262 | MTZJT-7739C | DIODE | |
| D350 | MTZJT-777.5B | DIODE | |
| D351 | 1SR124-4AT82 | DIODE | |
| D352 | 1SR124-4AT82 | DIODE | |
| D353 | 1SR124-4AT82 | DIODE | |
| D370 | MA165TA5 | DIODE | |
| D371 | MA165TA5 | DIODE | |
| D372 | MA165TA5 | DIODE | |
| D401 | MA165TA5 | DIODE | |
| D402 | ERA15-02V3 | DIODE | |
| D403 | MTZJ33B | DIODE | |
| D501 | 1SR124-4AT82 | DIODE | |
| D502 | MTZJT-778.2A | DIODE | |
| D510 | 1SR124-4AT82 | DIODE | |
| D551 | MTZJT-778.2C | DIODE | |
| D552 | EU02 | DIODE | |
| D553 | TVSRU3AMLFB4 | DIODE | |
| D554 | TVSRU3AMLFB4 | DIODE | |
| D555 | MA165TA5 | DIODE | |
| D556 | ERD07-15L7 | DIODE | |
| D557 | RU3LFA1 | DIODE | |
| D559 | EU02 | DIODE | |
| D601 | MTZJT-775.1A | DIODE | |
| D603 | MA165TA5 | DIODE | |
| D606 | MA165TA5 | DIODE | |
| D607 | BZT03C240113 | DIODE | |
| D701 | SFH617A-20P6 | PHOTO COUPLER | ⚠ |
| D702 | MA165TA5 | DIODE | |
| D703 | MA165TA5 | DIODE | |
| D704 | MTZJT-775.6C | DIODE | |
| D705 | MA29TA5 | DIODE | |
| D706 | MA4036MTA | DIODE | |
| D751 | MA4051 | DIODE | |
| D752 | AU02V0 | DIODE | |
| D753 | MTZJT-7730D | DIODE | |
| D754 | MTZJT-7727D | DIODE | |
| D755 | MA165TA5 | DIODE | |
| D802 | RBV4-08 | DIODE | |
| D803 | AU01V0 | DIODE | |
| D804 | SFH617A-20P6 | PHOTO COUPLER | ⚠ |
| D805 | 1SR124-4AT82 | DIODE | |
| D806 | 1SR124-4AT82 | DIODE | |
| D808 | TVSRU3AMLFA5 | DIODE | |
| D809 | R2KNLFA1 | DIODE | |
| D810 | MA165TA5 | DIODE | |
| D811 | 1SR124-4AT82 | DIODE | |
| D812 | MA165TA5 | DIODE | |

| Cct Ref | Parts Number | Description | |
|---|---|---|---|
| D813 | MTZJT-7720D | DIODE | |
| D814 | MTZJT-775.6A | DIODE | |
| D851 | TVSRU3AMLFA5 | DIODE | |
| D852 | TVSRU3AMLFA5 | DIODE | |
| D853 | 1SR124-4AT82 | DIODE | |
| D1101 | MTZJT-776.2A | DIODE | |
| D1104 | SLR56UR3FLF | LED | |
| D1106 | MA165TA5 | DIODE | |
| D1107 | MA165TA5 | DIODE | |
| D1201 | TVSS1WBS20 | DIODE | |
| D1202 | MA165TA5 | DIODE | |
| D1205 | MA165TA5 | DIODE | |
| D3101 | MTZJT-775.1A | DIODE | |
| **TRANSISTORS** | | | |
| Q253 | BC857B | TRANSISTOR | |
| Q255 | BC847B | TRANSISTOR | |
| Q351 | BC857B | TRANSISTOR | |
| Q401 | BC847B | TRANSISTOR | |
| Q402 | BC847B | TRANSISTOR | |
| Q501 | 2SD2398-M2 | TRANSISTOR | |
| Q551 | BU4508AFRB | TRANSISTOR | |
| Q601 | BC847B | TRANSISTOR | |
| Q602 | BC847B | TRANSISTOR | |
| Q603 | BC857B | TRANSISTOR | |
| Q606 | BC847B | TRANSISTOR | |
| Q701 | BC857B | TRANSISTOR | |
| Q702 | BC847B | TRANSISTOR | |
| Q751 | BC847B | TRANSISTOR | |
| Q752 | 2SK2538000LB | TRANSISTOR | |
| Q753 | BC557B/126 | TRANSISTOR | |
| Q851 | BC557B/126 | TRANSISTOR | |
| Q852 | 2SA684R | TRANSISTOR | |
| Q1101 | 2SD965-R | TRANSISTOR | |
| Q1102 | BC847B | TRANSISTOR | |
| Q1103 | BC847B | TRANSISTOR | |
| Q1104 | BC847B | TRANSISTOR | |
| Q1105 | BC847B | TRANSISTOR | |
| Q1106 | BC847B | TRANSISTOR | |
| Q1107 | BC847B | TRANSISTOR | |
| Q1109 | BC847B | TRANSISTOR | |
| Q1110 | BC847B | TRANSISTOR | |
| Q1201 | BC847B | TRANSISTOR | |
| Q1204 | BC847B | TRANSISTOR | |
| Q2001 | BC857B | TRANSISTOR | |
| Q2002 | BC857B | TRANSISTOR | |
| Q2003 | BC847B | TRANSISTOR | |
| Q2004 | BC847B | TRANSISTOR | |
| Q3104 | 2SC1318-S | TRANSISTOR | |
| **TRANSFORMERS** | | | |
| T553 | ETH19Z192AZ | TRANSFORMER | ⚠ |
| T801 | ETP35KAN619U | TRANSFORMER | ⚠ |
| T802 | 10653050-A | TRANSFORMER | ⚠ |
| **COILS** | | | |
| J116 | EXCELSA35T | COIL | |
| L001 | TALV35VB100K | COIL | |
| L502 | ELC08D682E | COIL | |
| L601 | TALV35VB100K | COIL | |
| L602 | TALV35VB100K | COIL | |
| L604 | EXCELDR35V | COIL | |
| L751 | ELC18B801L | COIL | |
| L752 | ELC10D822E | COIL | |
| L753 | EXCELSA35T | COIL | |
| L802 | EXCELSA35T | COIL | |
| L803 | EXCELDR35V | COIL | |
| L851 | EXCELSA35T | COIL | |

| Cct Ref | Parts Number | Description | | | |
|---|---|---|---|---|---|
| L852 | EXCELSA35T | COIL | | | |
| L853 | EXCELSA35T | COIL | | | |
| L1101 | TALV35VB331K | COIL | | | |
| L2001 | TALV35VB4R7K | COIL | | | |
| L2002 | TALV35VB4R7K | COIL | | | |
| L2004 | EXCELSA35T | COIL | | | |
| L2005 | TALV35VB6R8K | COIL | | | |
| L2006 | TALV35VB100K | COIL | | | |
| L3101 | TLT100K991R | COIL | | | |
| L3102 | TLT100K991R | COIL | | | |
| L3103 | EXCELSA35T | COIL | | | |
| L3104 | EXCELSA35T | COIL | | | |
| L3105 | TALV35VB100K | COIL | | | |
| L3107 | EXCELDR35V | COIL | | | |
| **FILTERS** | | | | | |
| L801 | ELF15N005A | LINE FILTER | | | |
| X103 | K3350K | SAW FILTER | | | |
| **CRYSTALS** | | | | | |
| X601 | TSSA010 | CRYSTAL | | | |
| X602 | EFCWS2F11T | CRYSTAL | | | |
| X2001 | 4730007158 | CRYSTAL | | | |
| **RESISTORS** | | | | | |
| JA41 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JSE26 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA1 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA2 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA3 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA4 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA5 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA6 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA7 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA9 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA10 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA11 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA12 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA15 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA16 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA18 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA19 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA20 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA21 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA27 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA28 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA29 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA30 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA31 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA32 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA33 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA34 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA36 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA37 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA38 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA39 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA40 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA42 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA43 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA44 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JA45 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JA46 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JSE1 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JSE2 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JSE11 | ERJ8GEY0R00 | S.M.CARB | .125W | 5% | 0 Ω |
| JSE15 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JSE18 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |
| JSE29 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω |

| Cct Ref | Parts Number | Description | | | | |
|---|---|---|---|---|---|---|
| JSE30 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| JSE33 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| JSE37 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| JSE43 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| JYA | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R001 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R002 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R003 | ERJ6GEYJ153 | S.M.CARB | 0.1W | 5% | 15K Ω | |
| R004 | ERG2SJS273 | METAL | 2W | 5% | 27K Ω | ⚠ |
| R005 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R006 | ERJ6GEYJ273 | S.M.CARB | 0.1W | 5% | 27K Ω | |
| R007 | ERJ6GEYJ302 | S.M.CARB | 0.1W | 5% | 3K Ω | |
| R008 | ERJ6GEYJ681 | S.M.CARB | 0.1W | 5% | 680 Ω | |
| R110 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R241 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R251 | ERJ6GEYJ680 | S.M.CARB | 0.1W | 5% | 68 Ω | |
| R252 | ERJ6GEYJ821 | S.M.CARB | 0.1W | 5% | 820 Ω | |
| R254 | ERJ6GEYJ680 | S.M.CARB | 0.1W | 5% | 68 Ω | |
| R256 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R257 | ERJ6GEYJ360 | S.M.CARB | 0.1W | 5% | 36 Ω | |
| R258 | ERJ6GEYJ821 | S.M.CARB | 0.1W | 5% | 820 Ω | |
| R259 | ERJ6GEYJ360 | S.M.CARB | 0.1W | 5% | 36 Ω | |
| R260 | ERJ6GEYJ472 | S.M.CARB | 0.1W | 5% | 4K7 Ω | |
| R261 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R262 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R263 | ERJ6GEYJ472 | S.M.CARB | 0.1W | 5% | 4K7 Ω | |
| R264 | ERJ6GEYJ512 | S.M.CARB | 0.1W | 5% | 5K1 Ω | |
| R265 | ERD25TJ2R2 | CARBON | 0.25W | 5% | 2R2 Ω | |
| R266 | ERD25TJ2R2 | CARBON | 0.25W | 5% | 2R2 Ω | |
| R268 | ERJ6GEYJ203 | S.M.CARB | 0.1W | 5% | 20K Ω | |
| R280 | ERJ6GEYJ204 | S.M.CARB | 0.1W | 5% | 200K Ω | |
| R281 | ERJ6GEYJ204 | S.M.CARB | 0.1W | 5% | 200K Ω | |
| R351 | ERDS1TJ182 | CARBON | 0.5W | 10% | 1K8 Ω | |
| R352 | ERDS1TJ182 | CARBON | 0.5W | 10% | 1K8 Ω | |
| R353 | ERDS1TJ182 | CARBON | 0.5W | 10% | 1K8 Ω | |
| R357 | ERDS1TJ102 | CARBON | 0.5W | 5% | 1K Ω | |
| R358 | ERDS1TJ102 | CARBON | 0.5W | 5% | 1K Ω | |
| R359 | ERDS1TJ102 | CARBON | 0.5W | 5% | 1K Ω | |
| R360 | ERG2SJS470H | METAL | 2W | 5% | 47 Ω | |
| R370 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R371 | ERJ6GEYJ391 | S.M.CARB | 0.1W | 5% | 390 Ω | |
| R401 | ERJ6GEYJ473 | S.M.CARB | 0.1W | 5% | 47K Ω | |
| R402 | ERJ6GEYJ332 | S.M.CARB | 0.1W | 5% | 3K3 Ω | |
| R403 | ERJ6ENF2701 | S.M.CARB | 0.1W | 5% | 27 Ω | |
| R404 | ERJ6ENF2701 | S.M.CARB | 0.1W | 5% | 27 Ω | |
| R405 | ERJ6ENF2701 | S.M.CARB | 0.1W | 5% | 27 Ω | |
| R406 | ERJ6GEYJ1R0 | S.M.CARB | 0.1W | 5% | 1 Ω | |
| R407 | ERDS1TJ471 | CARBON | 0.5W | 5% | 470 Ω | |
| R408 | ERDS1TJ471 | CARBON | 0.5W | 5% | 470 Ω | |
| R409 | ERJ6GEYJ473 | S.M.CARB | 0.1W | 5% | 47K Ω | |
| R410 | ERJ6GEYJ683 | S.M.CARB | 0.1W | 5% | 68K Ω | |
| R411 | ERJ6GEYJ821 | S.M.CARB | 0.1W | 5% | 820 Ω | |
| R415 | ERJ6ENF2701 | S.M.CARB | 0.1W | 5% | 27 Ω | |
| R501 | ERJ6GEYJ391 | S.M.CARB | 0.1W | 5% | 390 Ω | |
| R502 | ERD25TJ272F | CARBON | 0.25W | 5% | 2K7 Ω | |
| R503 | ERG3SJS220H | METAL | 3W | 5% | 22 Ω | |
| R504 | ERG2ANJP471H | METAL | 2W | 5% | 470 Ω | |
| R507 | ERJ6GEYJ122 | S.M.CARB | 0.1W | 5% | 1K2 Ω | |
| R553 | ERJ6GEYJ273 | S.M.CARB | 0.1W | 5% | 27K Ω | |
| R556 | ERG1SJ183 | METAL | 1W | 5% | 18K Ω | |
| R557 | ERDS1TJ184 | CARBON | 0.5W | 5% | 180 Ω | |
| R558 | ERD25TJ183 | CARBON | 0.25W | 5% | 18K Ω | |
| R560 | ERQ1CJP102 | FUSIBLE | 1W | 5% | 1K Ω | ⚠ |
| R561 | ERQ12AJ101 | FUSIBLE | 0.5W | 5% | 100 Ω | ⚠ |
| R601 | ERJ6GEYJ153 | S.M.CARB | 0.1W | 5% | 15K Ω | |
| R602 | ERJ6ENF3001 | S.M.CARB | 0.5W | 5% | 30 Ω | |

| Cct Ref | Parts Number | Description | | | | |
|---|---|---|---|---|---|---|
| R603 | ERJ6GEYJ393 | S.M.CARB | 0.1W | 5% | 39K Ω | |
| R604 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R605 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R606 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R607 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R608 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R609 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R610 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R611 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R612 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R613 | ERJ6GEYJ391 | S.M.CARB | 0.1W | 5% | 390 Ω | |
| R614 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R615 | ERJ6GEYJ470 | S.M.CARB | 0.1W | 5% | 47 Ω | |
| R616 | ERJ6GEYJ201 | S.M.CARB | 0.1W | 5% | 200 Ω | |
| R617 | ERJ6GEYJ181 | S.M.CARB | 0.1W | 5% | 180 Ω | |
| R618 | ERJ6GEYJ470 | S.M.CARB | 0.1W | 5% | 47 Ω | |
| R619 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R620 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R621 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R622 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R623 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R624 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R625 | ERJ6GEYJ222 | S.M.CARB | 0.1W | 5% | 2K2 Ω | |
| R626 | ERJ6GEYJ474 | S.M.CARB | 0.1W | 5% | 470K Ω | |
| R627 | ERJ6GEYJ474 | S.M.CARB | 0.1W | 5% | 470K Ω | |
| R628 | ERDS1TJ684 | CARBON | 0.5W | 5% | 680K Ω | |
| R629 | ERJ6GEYJ154 | S.M.CARB | 0.1W | 5% | 150K Ω | |
| R630 | ERJ6ENF1802 | S.M.CARB | 0.1W | 5% | 1K8 Ω | |
| R631 | ERO50PKF5603 | METAL | 0.5W | 1% | 560K Ω | ⚠ |
| R632 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R633 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R635 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R638 | ERJ6GEYJ151 | S.M.CARB | 0.1W | 5% | 150 Ω | |
| R639 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R646 | ERJ6GEYJ220 | S.M.CARB | 0.1W | 5% | 22 Ω | |
| R701 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R702 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R703 | ERJ6GEYJ392 | S.M.CARB | 0.1W | 5% | 3K9 Ω | |
| R704 | ERJ6GEYJ562 | S.M.CARB | 0.1W | 5% | 5K6 Ω | |
| R705 | ERDS1TJ821 | CARBON | 0.5W | 5% | 820 Ω | |
| R706 | ERJ6GEYJ563 | S.M.CARB | 0.1W | 5% | 56K Ω | |
| R707 | ERJ6GEYJ104 | S.M.CARB | 0.1W | 5% | 100K Ω | |
| R708 | ERJ6GEYJ273 | S.M.CARB | 0.1W | 5% | 27K Ω | |
| R709 | ERJ6GEYJ393 | S.M.CARB | 0.1W | 5% | 39K Ω | |
| R710 | ERJ6GEYJ393 | S.M.CARB | 0.1W | 5% | 39K Ω | |
| R711 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R712 | ERJ6GEYJ391 | S.M.CARB | 0.1W | 5% | 390 Ω | |
| R713 | ERG1SJ101 | METAL | 1W | 5% | 100 Ω | |
| R715 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R716 | ERJ6GEYJ432 | S.M.CARB | 0.1W | 5% | 4K3 Ω | |
| R717 | ERJ6GEYJ392 | S.M.CARB | 0.1W | 5% | 3K9 Ω | |
| R751 | ERJ6GEYJ152 | S.M.CARB | 0.1W | 5% | 1K5 Ω | |
| R752 | ERJ6GEYJ222 | S.M.CARB | 0.1W | 5% | 2K2 Ω | |
| R753 | ERJ6GEYJ152 | S.M.CARB | 0.1W | 5% | 1K5 Ω | |
| R754 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R756 | ERDS1TJ472 | CARBON | 0.5W | 5% | 4K7 Ω | |
| R757 | ERJ6GEYJ680 | S.M.CARB | 0.1W | 5% | 68 Ω | |
| R758 | ERJ6GEYJ392 | S.M.CARB | 0.1W | 5% | 3K9 Ω | |
| R759 | ERQ12HJ8R2 | FUSIBLE | 0.5W | 5% | 8R2 Ω | ⚠ |
| R760 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R761 | ERG1SJ563 | METAL | 1W | 5% | 56K Ω | |
| R762 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R763 | ERG3FJ561H | METAL | 3W | 5% | 560 Ω | |
| R802 | ERC12ZGK335D | SOLID | 0.5W | 10% | 3M3 Ω | ⚠ |
| R803 | ERF7ZK2R7 | WOUND | 7W | 20% | 2R7 Ω | ⚠ |
| R804 | ERG2ANJP104H | METAL | 2W | 5% | 100K Ω | |

| Cct Ref | Parts Number | Description | | | | |
|---|---|---|---|---|---|---|
| R805 | ERDS1TJ103 | CARBON | 0.5W | 5% | 10K Ω | |
| R806 | ERDS1TJ332 | CARBON | 0.5W | 5% | 3K3 Ω | |
| R809 | ERW2PKR33 | WOUND | 2W | 20% | R33 Ω | ⚠ |
| R810 | ERDS1TJ152 | CARBON | 0.5W | 5% | 1K5 Ω | |
| R811 | ERQ12HJ100 | FUSIBLE | 0.5W | 5% | 10 Ω | ⚠ |
| R812 | ERD75TAJ825 | CARBON | 0.75W | 5% | 8M2 Ω | ⚠ |
| R813 | ERDS1TJ103 | CARBON | 0.5W | 5% | 10K Ω | |
| R814 | ERDS1TJ330 | CARBON | 0.5W | 5% | 33 Ω | |
| R815 | ERDS1TJ681 | CARBON | 0.5W | 5% | 680 Ω | |
| R851 | ERG2SJS220H | METAL | 2W | 5% | 220 Ω | |
| R852 | ERG2SJS130H | METAL | 2W | 5% | 13 Ω | |
| R853 | ERG3FJ151 | METAL | 3W | 5% | 150 Ω | ⚠ |
| R854 | ERG3FJ151 | METAL | 3W | 5% | 150 Ω | ⚠ |
| R855 | ERDS1TJ4R7 | CARBON | 0.5W | 5% | 4R7 Ω | |
| R856 | ERD25TJ101 | CARBON | 0.25W | 5% | 100 Ω | |
| R857 | ERD25TJ202 | CARBON | 0.25W | 5% | 2K Ω | |
| R858 | ERDS1TJ103 | CARBON | 0.5W | 5% | 10K Ω | |
| R1101 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1102 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1104 | ERJ6GEYJ562 | S.M.CARB | 0.1W | 5% | 5K6 Ω | |
| R1105 | ERJ6GEYJ562 | S.M.CARB | 0.1W | 5% | 5K6 Ω | |
| R1106 | ERJ6GEYJ184 | S.M.CARB | 0.1W | 5% | 180K Ω | |
| R1107 | ERJ6GEYJ563 | S.M.CARB | 0.1W | 5% | 56K Ω | |
| R1108 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R1110 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R1112 | ERJ6GEYJ362 | S.M. CAR | 0.1W | 5% | 3K6 Ω | |
| R1113 | ERJ6GEYJ242 | S.M.CARB | 0.1W | 5% | 2K4 Ω | |
| R1114 | ERJ6GEYJ432 | S.M.CARB | 0.1W | 5% | 4K3 Ω | |
| R1115 | ERJ6GEYJ822 | S.M.CARB | 0.1W | 5% | 8K2 Ω | |
| R1116 | ERJ6GEYJ183 | S.M.CARB | 0.1W | 5% | 18K Ω | |
| R1117 | ERJ6GEYJ821 | S.M.CARB | 0.1W | 5% | 820 Ω | |
| R1118 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1119 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1120 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1121 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1122 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1125 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1127 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1128 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1129 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R1130 | ERJ6GEYJ473 | S.M.CARB | 0.1W | 5% | 47K Ω | |
| R1131 | ERJ6GEYJ472 | S.M.CARB | 0.1W | 5% | 4K7 Ω | |
| R1132 | ERJ6GEYJ225 | S.M.CARB | 0.1W | 5% | 2M2 Ω | |
| R1133 | ERJ6GEYJ104 | S.M.CARB | 0.1W | 5% | 100K Ω | |
| R1134 | ERJ6GEYJ224 | S.M.CARB | 0.1W | 5% | 220K Ω | |
| R1135 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R1136 | ERJ6GEYJ221 | S.M.CARB | 0.1W | 5% | 220 Ω | |
| R1137 | ERJ6GEYJ104 | S.M.CARB | 0.1W | 5% | 100K Ω | |
| R1138 | 2-640463-3 | METAL | 2W | 5% | 22K Ω | |
| R1139 | ERJ6GEYJ273 | S.M.CARB | 0.1W | 5% | 27K Ω | |
| R1140 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R1141 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R1144 | ERJ6GEYJ183 | S.M.CARB | 0.1W | 5% | 18K Ω | |
| R1145 | ERJ6GEYJ104 | S.M.CARB | 0.1W | 5% | 100K Ω | |
| R1146 | ERJ6GEYJ473 | S.M.CARB | 0.1W | 5% | 47K Ω | |
| R1147 | ERJ6GEYJ184 | S.M.CARB | 0.1W | 5% | 180K Ω | |
| R1148 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R1149 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R1150 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R1202 | ERDS1TJ680 | CARBON | 0.5W | 5% | 68 Ω | |
| R1205 | ERJ6GEYJ152 | S.M.CARB | 0.1W | 5% | 1K5 Ω | |
| R1206 | 2-640463-3 | METAL | 2W | 5% | 22K Ω | |
| R1209 | ERDS1TJ560 | CARBON | 0.5W | 5% | 56 Ω | |
| R2001 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R2002 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R2003 | ERJ6GEYJ222 | S.M.CARB | 0.1W | 5% | 2K2 Ω | |

| Cct Ref | Parts Number | Description | | | | |
|---|---|---|---|---|---|---|
| R2004 | ERJ6GEYJ222 | S.M.CARB | 0.1W | 5% | 2K2 Ω | |
| R2007 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R2008 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R2009 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R2010 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R2011 | ERJ6GEYJ153 | S.M.CARB | 0.1W | 5% | 15K Ω | |
| R2012 | ERJ6GEYJ153 | S.M.CARB | 0.1W | 5% | 15K Ω | |
| R2013 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R2014 | ERJ6GEYJ471 | S.M.CARB | 0.1W | 5% | 470 Ω | |
| R2015 | ERJ6GEYJ102 | S.M.CARB | 0.1W | 5% | 1K Ω | |
| R2016 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R2017 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R2018 | ERJ6GEYJ681 | S.M.CARB | 0.1W | 5% | 680 Ω | |
| R2020 | ERJ6GEYJ202 | S.M.CARB | 0.1W | 5% | 2K Ω | |
| R2021 | ERJ6GEYJ103 | S.M.CARB | 0.1W | 5% | 10K Ω | |
| R2022 | ERJ6GEYJ303 | S.M.CARB | 0.1W | 5% | 30K Ω | |
| R3106 | ERJ6GEYJ101 | S.M.CARB | 0.1W | 5% | 100 Ω | |
| R3111 | ERDS1TJ101 | CARBON | 0.5W | 5% | 100 Ω | |
| R3115 | ERJ6GEYJ151 | S.M.CARB | 0.1W | 5% | 150 Ω | |
| R3116 | ERJ6GEYJ750 | S.M.CARB | 0.1W | 5% | 75 Ω | |
| R3117 | ERJ6GEYJ750 | S.M.CARB | 0.1W | 5% | 75 Ω | |
| R3118 | ERJ6GEYJ750 | S.M.CARB | 0.1W | 5% | 75 Ω | |
| R3120 | ERDS1TJ750 | CARBON | 0.5W | 5% | 75 Ω | |
| R3121 | ERJ6GEYJ334 | S.M.CARB | 0.1W | 5% | 330K Ω | |
| R3122 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R3123 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R3124 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R3125 | ERJ6GEYJ104 | S.M.CARB | 0.1W | 5% | 100K Ω | |
| R3129 | ERDS1TJ750 | CARBON | 0.5W | 5% | 75 Ω | |
| R3130 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R3131 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |
| R3132 | ERJ6GEYJ221 | S.M.CARB | 0.1W | 5% | 220 Ω | |
| R3133 | ERJ6GEYJ221 | S.M.CARB | 0.1W | 5% | 220 Ω | |
| R3134 | ERJ6GEY0R00 | S.M.CARB | 0.1W | 5% | 0 Ω | |

## CAPACITORS

| | | | | | |
|---|---|---|---|---|---|
| C001 | ECA1CM220GB | ELECT | 16V | 22µF | |
| C002 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C005 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C006 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C007 | ECA1HM330B | ELECT | 50V | 33µF | |
| C008 | ECA1HM010B | ELECT | 50V | 1pF | |
| C009 | ECUV1H100DCX | S.M. CAP | 50V | 10pF | |
| C010 | ECUV1H100DCX | S.M. CAP | 50V | 10pF | |
| C117 | ECJ2VB1H103K | ELECT | 350V | 10nF | |
| C118 | ECJ2VB1H103K | ELECT | 350V | 10nF | |
| C251 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C252 | ECJ2VB1H223K | ELECT | 350V | 22nF | |
| C253 | ECKR1H103ZF5 | CERAMIC | 50V | 100µF | |
| C254 | ECQV1H334JL3 | FILM | 50V | 330nF | |
| C255 | ECA1CM470B | ELECT | 16V | 47µF | |
| C256 | ECJ2VB1H223K | ELECT | 350V | 22nF | |
| C257 | ECA1CHG102B | ELECT | 10V | 1000µF | |
| C258 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C259 | ECQV1H334JL3 | FILM | 50V | 330nF | |
| C260 | ECA1VM102GB | ELECT | 35V | 1nF | |
| C261 | ECA1VM102GB | ELECT | 35V | 1nF | |
| C262 | ECA1HM3R3B | ELECT | 50V | 3R3µF | |
| C263 | ECA1HM010B | ELECT | 50V | 1pF | |
| C264 | ECA1HHG222E | ELECT | 50V | 2200µF | |
| C265 | ECA1HM3R3B | ELECT | 50V | 3R3µF | |
| C266 | ECA1HM010B | ELECT | 50V | 1pF | |
| C267 | ECJ2YB1H104K | ELECT | 350V | 100nF | |
| C268 | ECJ2YB1H104K | ELECT | 350V | 100nF | |
| C270 | ECJ2YB1H104K | ELECT | 350V | 100nF | |
| C351 | ECA2EM010B | ELECT | 250V | 1µF | |
| C352 | ECKC2H152J | CERAMIC | 500V | 1.5nF | ⚠ |

| Cct Ref | Parts Number | Description | | | |
|---|---|---|---|---|---|
| C354 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C356 | ECUV1H102ZFX | S.M. CAP | 50V | 1nF | |
| C357 | ECKC3D152J | CERAMIC | 2KV | 1.5nF | ⚠ |
| C358 | ECUV1H561KBX | S.M. CAP | 50V | 560pF | |
| C405 | ECUV1H100CCX | S.M. CAP | 50V | 10pF | |
| C406 | ECA1HHG101B | ELECT | 50V | 100µF | |
| C408 | ECQV1H274JL3 | FILM | 50V | 270nF | |
| C409 | ECA1HM2R2B | ELECT | 50V | 2.2µF | |
| C410 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C501 | EEUFC1H390B | CERAMIC | 50V | 390pF | |
| C502 | ECQM1273KZW | FILM | 100V | 27nF | |
| C504 | ECUV1H222JCX | S.M. CAP | 50V | 2.2nF | |
| C551 | ECUV1H220JCX | S.M. CAP | 50V | 22pF | |
| C554 | ECA1VM471GB | ELECT | 35V | 470µF | |
| C555 | ECKC2H471J | CERAMIC | 500V | 470pF | ⚠ |
| C556 | ECKC2H471J | CERAMIC | 500V | 470pF | ⚠ |
| C557 | ECKC2H331J | CERAMIC | 500V | 330pF | ⚠ |
| C558 | ECA2CM3R3B | ELECT | 160V | 3.3µF | |
| C560 | ECQF4273JZH | FILM | 400V | 27nF | ⚠ |
| C562 | ECA2GHG2R2B | ELECT | 400V | 27nF | |
| C564 | ECA1VM471GB | ELECT | 35V | 470µF | |
| C565 | ECKC2H471J | CERAMIC | 500V | 470pF | ⚠ |
| C566 | ECA1VM471GB | ELECT | 35V | 470µF | |
| C567 | ECKC3D681J | CERAMIC | 2KV | 680pF | ⚠ |
| C570 | ECKC2H152J | CERAMIC | 500V | 1.5nF | ⚠ |
| C601 | ECA1CM102B | ELECT | 16V | 1000µF | |
| C602 | ECJ2YB1H104K | ELECT | 350V | 100nF | |
| C603 | ECJ2VB1H472K | ELECT | 350V | 4.7nF | |
| C604 | ECQV1H224JL3 | FILM | 50V | 220nF | |
| C605 | ECQV1H224JL3 | FILM | 50V | 220nF | |
| C606 | ECUV1H222JCX | S.M. CAP | 50V | 2.2nF | |
| C607 | ECA1HM010B | ELECT | 50V | 1pF | |
| C608 | ECA1HM2R2B | ELECT | 50V | 2.2µF | |
| C609 | ECJ2YB1H104K | ELECT | 350V | 100nF | |
| C610 | ECJ2VB1H103K | ELECT | 350V | 10nF | |
| C612 | ECJ2VB1H472K | ELECT | 350V | 4.7nF | |
| C613 | ECJ2VB1H472K | ELECT | 350V | 4.7nF | |
| C614 | ECQV1H104JL3 | FILM | 50V | 0.1µF | |
| C615 | ECQV1H224JL3 | FILM | 50V | 220nF | |
| C618 | ECEA1CU100 | ELECT | 16V | 10µF | |
| C620 | ECUV1H470GCG | S.M. CAP | 50V | 47pF | |
| C621 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C622 | ECUV1H101JCX | S.M. CAP | 50V | 100pF | |
| C623 | ECUV1H220GCG | S.M. CAP | 50V | 22pF | |
| C624 | ECQB1H223K | FILM | 50V | 22nF | |
| C625 | ECQB1H223K | FILM | 50V | 22nF | |
| C626 | ECQB1H223K | FILM | 50V | 22nF | |
| C627 | ECJ2YB1H473K | ELECT | 350V | 47nF | |
| C628 | ECJ2YB1H473K | ELECT | 350V | 47nF | |
| C629 | ECJ2YB1H104K | ELECT | 350V | 100nF | |
| C630 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C631 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C632 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C633 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C634 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C635 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C636 | ECA1CM102B | ELECT | 16V | 1000µF | |
| C637 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C638 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C639 | ECA1HM220GB | ELECT | 50V | 22µF | |
| C640 | ECA1HM2R2B | ELECT | 50V | 2.2µF | |
| C642 | ECA1HM010B | ELECT | 50V | 1pF | |
| C646 | ECJ2YB1H104K | ELECT | 350V | 100nF | |
| C650 | ECUV1H390JCX | S.M. CAP | 50V | 39pF | |
| C651 | ECUV1H390JCX | S.M. CAP | 50V | 39pF | |
| C652 | ECUV1H390JCX | S.M. CAP | 50V | 39pF | |

| Cct Ref | Parts Number | Description | | | |
|---|---|---|---|---|---|
| C653 | ECJ2YB1H683K | ELECT | 50V | 68nF | |
| C654 | ECJ2VB1H103K | ELECT | 350V | 10nF | |
| C701 | ECA1HM100B | ELECT | 50V | 10µF | |
| C702 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C703 | ECA1HHG100B | ELECT | 50V | 10µF | |
| C704 | ECQB1H122J | FILM | 50V | 1.2nF | |
| C705 | ECQB1H223K | FILM | 50V | 22nF | |
| C706 | ECQP1152JZW | FILM | 100V | 1.5nF | |
| C707 | ECQP1102JZW | FILM | 100V | 1nF | |
| C708 | ECA1HM220GB | ELECT | 50V | 22µF | |
| C752 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C753 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C754 | ECA1JM101B | ELECT | 63V | 100µF | |
| C755 | ECKC2H471J | CERAMIC | 500V | 470pF | ⚠ |
| C802 | ECKWNA332MEC | CERAMIC | 250V | 3.3nF | ⚠ |
| C803 | ECKWNA152MEC | CERAMIC | 250V | 1.5nF | ⚠ |
| C805 | ECQE2A474MWB | FILM | 250V | 470nF | ⚠ |
| C806 | ECKC2H472J | CERAMIC | 500V | 4.7nF | ⚠ |
| C807 | ECKC2H472J | CERAMIC | 500V | 4.7nF | ⚠ |
| C808 | ECKC2H472J | CERAMIC | 500V | 4.7nF | ⚠ |
| C809 | ECOS2GA151BB | ELECT | 400V | 150µF | |
| C810 | ECA1HHG101B | ELECT | 50V | 100µF | |
| C811 | ECKC1H471J | CERAMIC | 50V | 470pF | |
| C812 | ECKC3A182J | CERAMIC | 1KV | 1800pF | ⚠ |
| C813 | ECKW3D221JBN | CERAMIC | 2kV | 220pF | |
| C814 | ECKC3D102J | CERAMIC | 2KV | 1nF | ⚠ |
| C815 | ECA2CHG221E | ELECT | 160V | 220µF | |
| C816 | ECKC2H472J | CERAMIC | 500V | 4.7nF | ⚠ |
| C818 | ECQB1H683K | FILM | 50V | 68nF | |
| C851 | ECA1CM471B | ELECT | 16V | 470µF | |
| C854 | ECKC2H471J | CERAMIC | 500V | 470pF | ⚠ |
| C855 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C856 | ECA1VM471GB | ELECT | 35V | 470µF | |
| C857 | ECA1CM471B | ELECT | 16V | 470µF | |
| C858 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C859 | ECA1HHG471E | ELECT | 50V | 470µF | |
| C860 | ECA1VHG331B | ELECT | 35V | 330pF | |
| C1101 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C1102 | ECA1CM220GB | ELECT | 16V | 22µF | |
| C1103 | ECUV1H331JCX | S.M. CAP | 50V | 330pF | |
| C1104 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C1105 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C1107 | ECUV1H221JCX | S.M. CAP | 50V | 220pF | |
| C1108 | ECUV1H221JCX | S.M. CAP | 50V | 220pF | |
| C1201 | ECA1CM471B | ELECT | 16V | 470µF | |
| C1202 | ECQV1H334JL3 | FILM | 50V | 330nF | |
| C1203 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C1204 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C1205 | ECJ2VF1C334Z | ELECT | 350V | 330nF | |
| C1210 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C2001 | ECJ2VB1H103K | ELECT | 350V | 10nF | |
| C2002 | ECJ2VB1H103K | ELECT | 350V | 10nF | |
| C2003 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C2004 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C2005 | ECUV1H102JCX | S.M. CAP | 50V | 1nF | |
| C2006 | ECUV1H102JCX | S.M. CAP | 50V | 1nF | |
| C2007 | ECUV1H102JCX | S.M. CAP | 50V | 1nF | |
| C2008 | ECUV1H010CCX | S.M. CAP | 50V | 1pF | |
| C2009 | ECUV1H010CCX | S.M. CAP | 50V | 1pF | |
| C2012 | ECUV1H470JCX | S.M. CAP | 50V | 47pF | |
| C2013 | ECUV1H070DTX | S.M. CAP | 50V | 70pF | |
| C2014 | ECUV1H560GCG | S.M. CAP | 50V | 56pF | |
| C2015 | ECUV1H220JCX | S.M. CAP | 50V | 22pF | |
| C2016 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C2017 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C2018 | ECEA1CU100 | ELECT | 16V | 10µF | |

| Cct Ref | Parts Number | Description | | | |
|---|---|---|---|---|---|
| C2019 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C2020 | ECQV1H474JL3 | FILM | 50V | 470nF | |
| C2021 | ECQV1H474JL3 | FILM | 50V | 470nF | |
| C2022 | ECUV1H221JCX | S.M. CAP | 50V | 220pF | |
| C2023 | ECUV1H221JCX | S.M. CAP | 50V | 220pF | |
| C2024 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C2025 | ECA1HM2R2B | ELECT | 50V | 2.2µF | |
| C2026 | ECEA1CU100 | ELECT | 16V | 10µF | |
| C2027 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C2029 | ECA1CM470B | ELECT | 16V | 47µF | |
| C2030 | ECA1CM470B | ELECT | 16V | 47µF | |
| C2031 | ECUV1H102JCX | S.M. CAP | 50V | 1nF | |
| C2032 | ECUV1H102JCX | S.M. CAP | 50V | 1nF | |
| C2033 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C2036 | ECUV1H471JCX | S.M. CAP | 50V | 470pF | |
| C2037 | ECUV1H221JCX | S.M. CAP | 50V | 220pF | |
| C2038 | ECJ2VB1H103K | ELECT | 350V | 10nF | |
| C2039 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C2040 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C2041 | ECUV1H100DCX | S.M. CAP | 50V | 10pF | |
| C2042 | ECUV1H100DCX | S.M. CAP | 50V | 10pF | |
| C3103 | ECEA1HU101 | ELECT | 50V | 100µF | |
| C3104 | ECJ2VF1H104Z | ELECT | 350V | 100nF | |
| C3109 | ECUV1H222KBX | S.M. CAP | 50V | 2.2nF | |
| C3110 | ECUV1H222KBX | S.M. CAP | 50V | 2.2nF | |
| C3111 | ECUV1H222KBX | S.M. CAP | 50V | 2.2nF | |
| C3112 | ECUV1H222KBX | S.M. CAP | 50V | 2.2nF | |
| C3113 | ECUV1H222KBX | S.M. CAP | 50V | 2.2nF | |
| C3114 | ECUV1H222KBX | S.M. CAP | 50V | 2.2nF | |
| C3116 | ECUV1H561KBX | S.M. CAP | 50V | 560pF | |
| C3117 | ECUV1H561KBX | S.M. CAP | 50V | 560pF | |
| **TERMINALS AND LINKS** | | | | | |
| JK3101 | TJB16673 | A.V. TERMINAL | | | |
| JK3102 | TJB8E011 | SCART SOCKET | | | |
| **SWITCHES** | | | | | |
| S801 | ESB92S11B | SWITCH | | | ⚠ |
| S1101 | EVQ21405R | SWITCH | | | |
| S1102 | EVQ21405R | SWITCH | | | |
| S1103 | EVQ21405R | SWITCH | | | |
| S1104 | EVQ21405R | SWITCH | | | |
| S1105 | EVQ21405R | SWITCH | | | |
| **RELAYS** | | | | | |
| RL801 | DJ5D1-0M | RELAY | | | ⚠ |

## DIFFERENCES FOR MODEL TX–25LK1P

**EXPLODED VIEW**

| | | | |
|---|---|---|---|
| 15 | A59EEQ15X97 | C.R.T. | ⚠ |
| 16 | TKY8E530 | CABINET | |
| 17 | TLK8E05162 | DEGAUSS COIL | ⚠ |
| 18 | TNP8EE011DW | E P.C.B. | ⚠ |
| 19 | TBM8E2040 | MODEL LABEL | |
| 20 | TKU8E00610 | REAR COVER | ⚠ |
| 21 | TNP8EY015AG | Y P.C.B. | ⚠ |

**MISCELLANEOUS COMPONENTS**

| | | |
|---|---|---|
| | TPC8E4832 | CARTON |
| | TPD8E728 | TOP CUSHION |
| | TPD8E729 | BOTTOM CUSHION |
| | UM-3DJ-2P | BATTERY PACK |

**INSTRUCTION BOOKS**

| | | | |
|---|---|---|---|
| | TQB8E2955MN1 | BULGARIAN,ROMANIAN | ⚠ |
| | TQB8E2955PQ1 | POLISH,HUNGARIAN | ⚠ |
| | TQB8E2955RU1 | CZECH,ENGLISH | ⚠ |

| Cct Ref | Parts Number | Description | | | | |
|---|---|---|---|---|---|---|
| **I.C.s** | | | | | | |
| IC1103 | XPK2-1KPZ | EAROM | | | | |
| **COILS** | | | | | | |
| L501 | ELH5L4119 | COIL | | | | |
| **RESISTORS** | | | | | | |
| R416 | ERDS1TJ1R0 | CARBON | 0.5W | 5% | 1 Ω | |
| R417 | ERDS1TJ1R0 | CARBON | 0.5W | 5% | 1 Ω | |
| R559 | ERQ1ZJP1R5S | RESISTOR | 1W | 5% | 1R5 Ω | |
| **CAPACITORS** | | | | | | |
| | ECKC3D122J | CERAMIC | 2KV | | 1.2nF | ⚠ |
| C559 | ECWH20103JVB | FILM | 2KV | 25L | 10nF | |
| C563 | ECWF2334JBB | FILM | 250V | | 330nF | |
| C751 | ECWF2684JBB | FILM | 250V | 25L | 680nF | |

## DIFFERENCES FOR MODEL TX–28LK1P

**EXPLODED VIEW**

| | | | |
|---|---|---|---|
| 15 | A66ECF50X04 | C.R.T. | ⚠ |
| 16 | TKY8E520 | CABINET | |
| 17 | TLK8E05140 | DEGAUSS COIL | ⚠ |
| 18 | TNP8EE011EC | E P.C.B. | ⚠ |
| 19 | TBM8E2034 | MODEL LABEL | ⚠ |
| 20 | TKU8E00620 | REAR COVER | ⚠ |
| 21 | TNP8EY015AH | Y P.C.B. | ⚠ |

**MISCELLANEOUS COMPONENTS**

| | | |
|---|---|---|
| | TPC8E4831 | CARTON |
| | TPD8E726 | TOP CUSHION |
| | TPD8E727 | BOTTOM CUSHION |
| | UM-3DJ-2P | BATTERY PACK |

**INSTRUCTION BOOKS**

| | | | |
|---|---|---|---|
| | TQB8E2955MN1 | BULGARIAN,ROMANIAN | ⚠ |
| | TQB8E2955PQ1 | POLISH,HUNGARIAN | ⚠ |
| | TQB8E2955RU1 | CZECH,ENGLISH | ⚠ |

| | | | | | |
|---|---|---|---|---|---|
| **I.C.s** | | | | | |
| IC1103 | XPK2-3MPZ | EAROM | | | |
| **COILS** | | | | | |
| L501 | ELH5L4105 | COIL | | | |
| **RESISTORS** | | | | | |
| R416 | ERDS1TJ1R5 | CARBON | 0.5W | 5% | 1R5 Ω |
| R417 | ERDS1TJ1R2 | CARBON | 0.5W | 5% | 1R2 Ω |
| R418 | ERDS1TJ1R2 | CARBON | 0.5W | 5% | 1R2 Ω |
| R559 | ERQ1ABJP3R0S | METAL | 1W | 5% | 3 Ω |
| **CAPACITORS** | | | | | |
| C559 | ECWH20123JVB | FILM | 2kV | | 12nF |
| C563 | ECWF2394JBB | FILM | 250V | | 390nF |
| C751 | ECWF2334JBB | FILM | 250V | | 330nF |

# SCHEMATIC DIAGRAMS

# (Z8 CHASSIS)

**IMPORTANT SAFETY NOTICE**
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturers' specified parts.

## NOTE

4. RESISTOR
   All resistors are carbon ¼W resistor, unless marked otherwise.
   Unit of resistance is OHM (Ω) (k=1,000, M=1,000,000)
5. CAPACITORS
   All capacitors are ceramic 50V unless marked otherwise.
   Unit of capacitance is μF unless otherwise stated.
6. COIL
   Unit of inductance is μH, unless otherwise stated.
7. TEST POINT
   Test Point Position
8. EARTH SYMBOL
   Chassis Earth (Cold)
   Line Earth (Hot)
9. VOLTAGE MEASUREMENT
   Voltage is measured by a d.c. voltmeter.
   Measurement conditions are as follows:

| | |
|---|---|
| Power source | a.c. 220V-240V, 50Hz |
| Receiving Signal | Colour Bar signal (RF) |
| All customer controls | Maximum position |

10.
   Indicates the Video signal path
   Indicates the Audio signal path

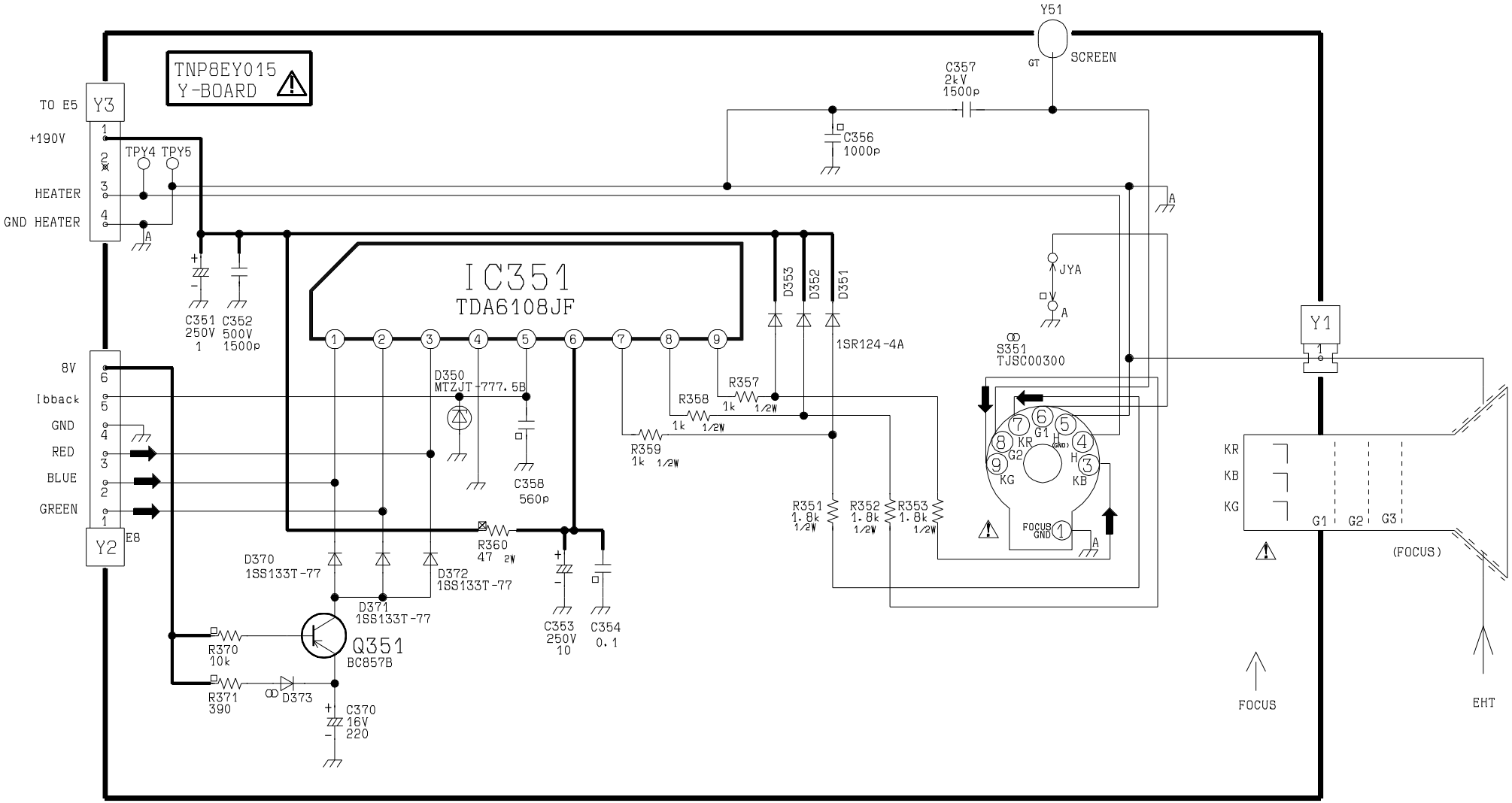
These schematic diagrams are the latest at time of printing and are subject to change without notice.

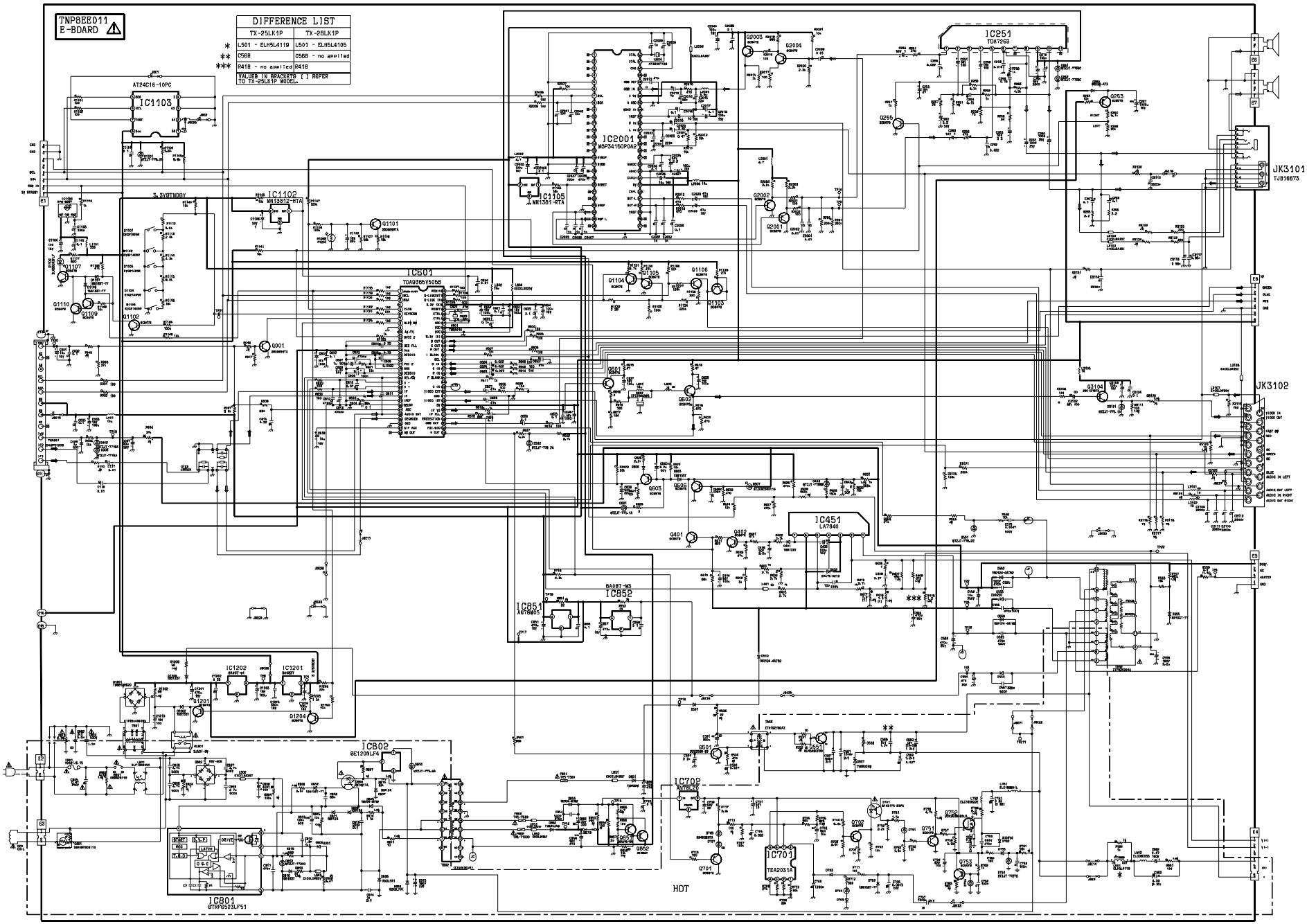
## REMARKS

a. Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
b. Do not short circuit the hot and cold circuits as electrical components may be damaged.
c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
d. Make sure to disconnect the power plug before removing the chassis.

## NOTE

1. The Power Supply Circuit contains a circuit area, which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits, except the Power Circuit, are COLD.


TNP8EY015
Y-BOARD
TO E5
Y3
+190V
HEATER
GND HEATER
TPY4 TPY5
C351 250V 1
C352 500V 1500p
IC351
TDA6108JF
8V
Ibback
GND
RED
BLUE
GREEN
Y2
E8
D350 MTZJT-777.5B
C358 560p
R360 47 2W
D370 1SS133T-77
D371 1SS133T-77
D372 1SS133T-77
R370 10k
R371 390
Q351 BC857B
D373
C370 16V 220
C353 250V 10
C354 0.1
R359 1k 1/2W
R358 1k 1/2W
R357 1k 1/2W
D353
D352
D351
1SR124-4A
R351 1.8k 1/2W
R352 1.8k 1/2W
R353 1.8k 1/2W
Y51
GT
SCREEN
C357 2kV 1500p
C356 1000p
JYA
S351 TJSC00300
Y1
KR
KB
KG
G1
G2
G3
(FOCUS)
FOCUS
EHT


TNP8EE011
E-BDARD
DIFFERENCE LIST
TX-25LK1P
TX-28LK1P
L501 - ELH5L4119
L501 - ELH5L4105
C568
C568 - no applied
R418 - no applied
R418
VALUES IN BRACKETS [ ] REFER TO TX-25LK1P MODEL.
IC1103
AT24C16-10PC
IC1102
MN13812-HTA
IC501
TDA9365Y5056
IC2001
M3P3415DP0A2
IC1105
MN1381-HTA
IC251
TDA7265
IC451
LA7840
IC851
AN78M05
IC852
BA08T-W3
IC1202
IC1201
IC802
BE120NLP4
IC801
STRF6523LF51
IC702
AN78L20
IC701
TEA2031A
JK3101
TJB16673
JK3102
HDT

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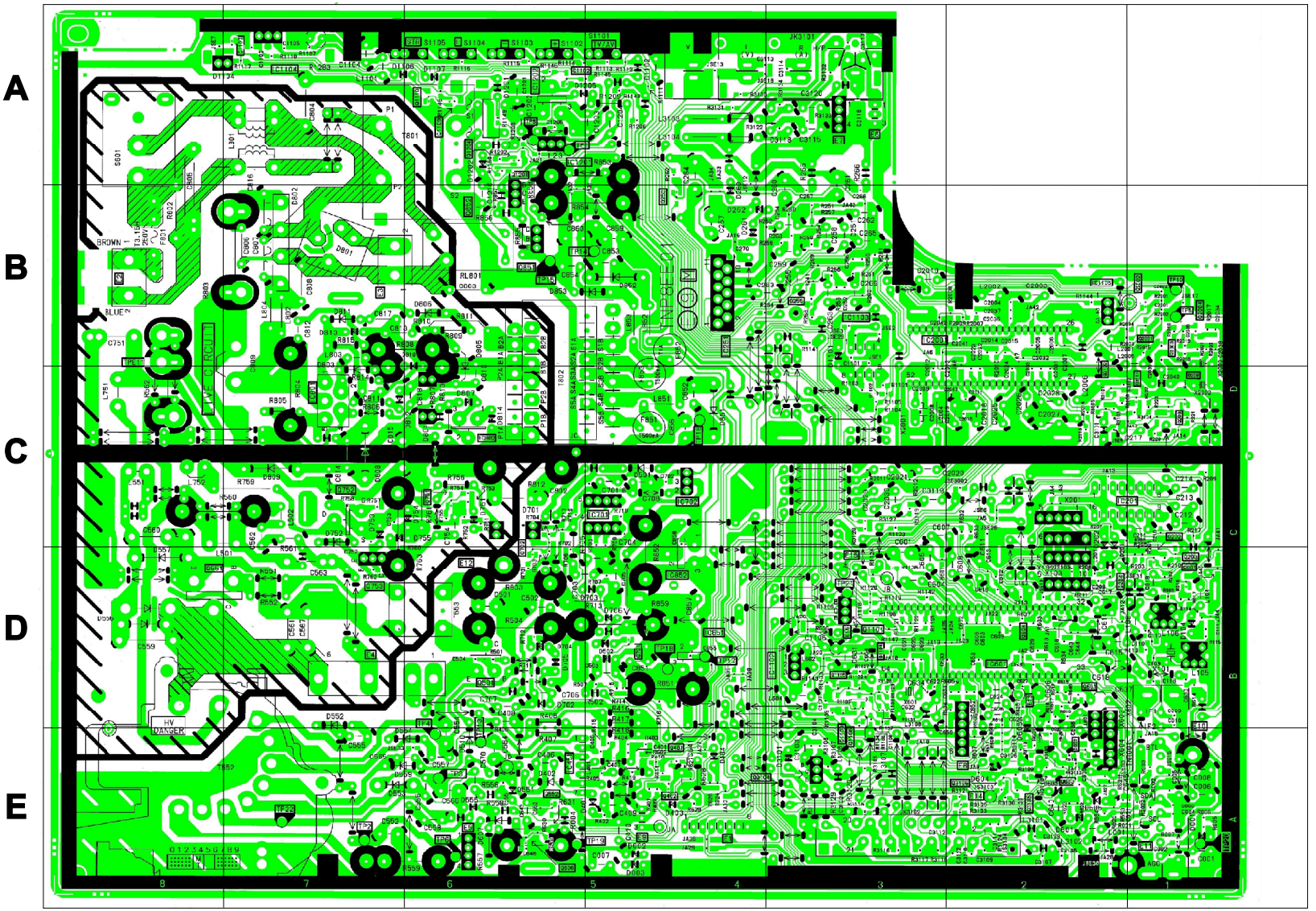
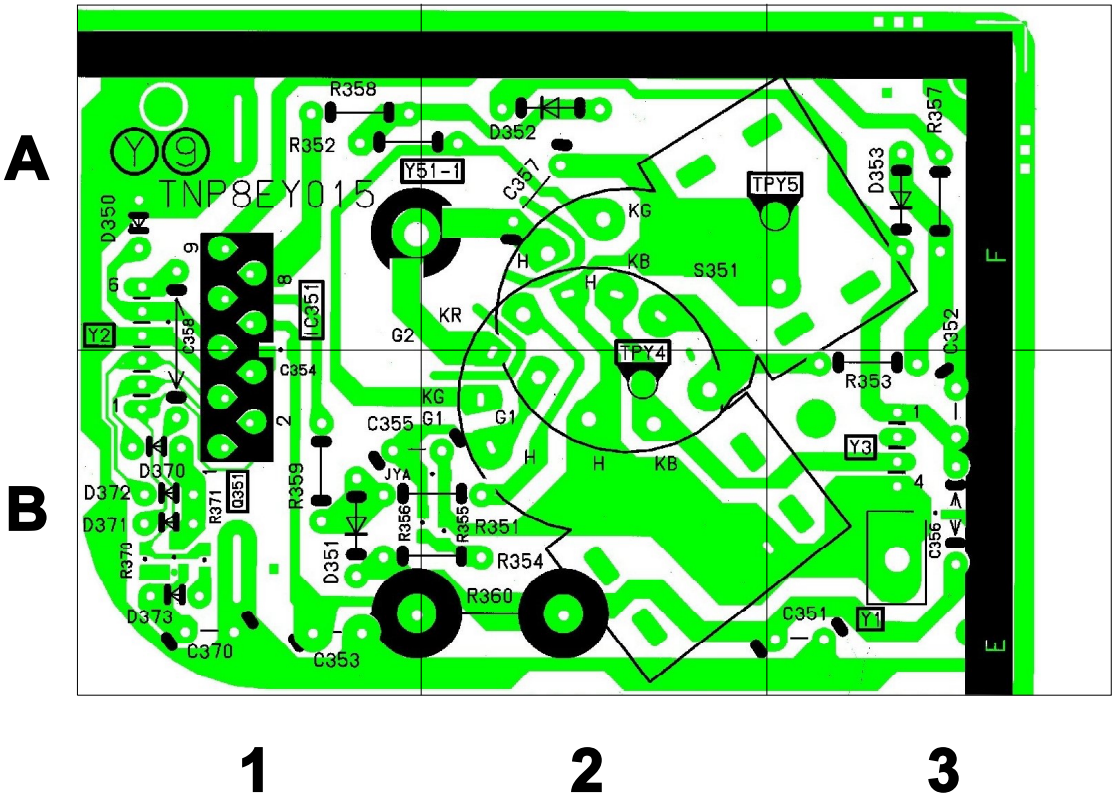
## E - BOARD TNP8EE011

| TRAN'S | | DIODES | | D852 | B4 |
|---|---|---|---|---|---|
| Q253 | B4 | D002 | E4 | D853 | B4 |
| Q255 | B5 | D003 | E4 | D1101 | B5 |
| Q401 | E4 | D260 | B4 | D1104 | A1 |
| Q402 | E4 | D261 | B4 | D1106 | A2 |
| Q501 | D3 | D262 | B4 | D1107 | A3 |
| Q551 | D1 | D401 | E4 | D1201 | A3 |
| Q601 | D6 | D402 | E3 | D1202 | A3 |
| Q602 | A2 | D403 | E4 | D1205 | A3 |
| Q603 | E6 | D501 | C4 | D3101 | E5 |
| Q606 | E3 | D502 | D4 | | |
| Q701 | D4 | D510 | E3 | I.C.'S | |
| Q702 | D3 | D551 | E3 | IC251 | B4 |
| Q751 | C3 | D552 | D2 | IC451 | E3 |
| Q752 | C2 | D553 | E2 | IC601 | D6 |
| Q753 | D2 | D554 | E3 | IC701 | C4 |
| Q851 | B3 | D555 | E3 | IC702 | C4 |
| Q852 | B3 | D556 | D1 | IC801 | C2 |
| Q1101 | D5 | D557 | D1 | IC802 | C3 |
| Q1102 | A3 | D559 | E2 | IC851 | D4 |
| Q1103 | E5 | D601 | E6 | IC852 | D4 |
| Q1104 | D6 | D603 | E6 | IC1102 | D5 |
| Q1105 | D5 | D606 | E6 | IC1103 | B5 |
| Q1106 | E5 | D607 | E3 | IC1104 | A2 |
| Q1107 | A2 | D701 | C3 | IC1105 | B6 |
| Q1109 | A3 | D702 | D3 | IC1201 | A3 |
| Q1110 | A3 | D703 | D4 | IC1202 | A3 |
| Q1201 | B3 | D704 | D3 | IC2001 | B5 |
| Q1204 | A3 | D705 | D3 | | |
| Q2001 | B7 | D706 | D4 | T.P.'S | |
| Q2002 | B7 | D707 | D4 | TP1 | A3 |
| Q2003 | B7 | D751 | C3 | TP2 | E2 |
| Q2004 | B7 | D753 | C2 | TP3 | E3 |
| Q3104 | E4 | D754 | C3 | TP4 | E3 |
| | | D801 | E7 | TP5 | B7 |
| | | D802 | E7 | TP6 | E3 |
| | | D803 | C2 | TP8 | A3 |
| | | D804 | C3 | TP10 | B7 |
| | | D805 | B3 | TP13 | E3 |
| | | D806 | B3 | TP14 | B4 |
| | | D808 | C2 | TP15 | B3 |
| | | D809 | C2 | TP16 | C4 |
| | | D810 | B3 | TP17 | D4 |
| | | D811 | B2 | TP18 | D4 |
| | | D812 | C2 | TP19 | E3 |
| | | D813 | B2 | TP20 | E7 |
| | | D814 | C3 | TP21 | D5 |
| | | D851 | C4 | TP22 | E2 |
| | | | | TPE11 | B1 |



## Y - BOARD TNP8EY015

| TRAN'S | |
|---|---|
| Q351 | B1 |
| **DIODES** | |
| D350 | A1 |
| D351 | B1 |
| D352 | A2 |
| D353 | A3 |
| D370 | B1 |
| D371 | B1 |
| D372 | B1 |
| D373 | B1 |
| **T.P.'S** | |
| TPY4 | B2 |
| TPY5 | A3 |
| **I.C.'S** | |
| IC351 | A1 |

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## NOTES